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COVID-19 Vaccine Coverage Among People With HIV in the Vaccine Safety Datalink

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BACKGROUND

- People with HIV (PWH) may be at increased risk for severe COVID-19 outcomes compared with people without HIV.
- COVID-19 vaccination coverage among PWH is largely unknown, especially among those with advanced HIV or comorbidities.
- We evaluated coverage and factors associated with completion of the initial COVID-19 vaccine primary series in adult PWH.

METHODS

Study design: A retrospective cohort study during Dec. 1, 2020- Dec. 31, 2021.

Study population: adult PWH (≥18 years) enrolled in 8 healthcare organizations participating in the Vaccine Safety Datalink (VSD) project.

Outcomes:

- COVID-19 vaccine coverage.
- Factors associated with completion of two doses of the mRNA vaccines or one dose of the single-dose Janssen COVID-19 vaccine.

Covariates: socio-demographics, comorbidities, health care utilization, HIV factors, community-level vaccine coverage and COVID-19 incidence.

Statistical analysis: Multivariable analysis was conducted using a robust Poisson regression model to estimate the rate ratio (RR) for factors associated with completion of the initial primary vaccine series (vs. non vaccinated), accounting for follow-up time.

The majority (90.5%, n=19,966) completed the initial primary series, 314 (1.4%) received one dose mRNA vaccine, and 1,783 PWH (8.1%) received no dose.

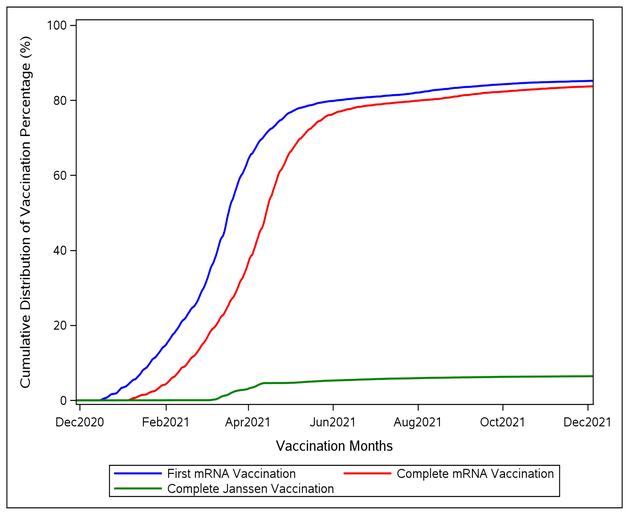
Males (RR= 1.06, 95%CI: 1.04-1.08) and Asian (RR=1.05, 95%CI: 1.03-1.06, vs. White) were more likely to complete the primary series.

PWH who received influenza vaccination in the past 2 years were more likely to complete the initial COVID-19 vaccine series (RR=1.17, 95%CI: 1.15, 1.20).

PWH with CD4 count <200 (RR=0.97, 95%CI: 0.94-0.99) and those who failed to achieve viral suppression were less likely to complete the initial primary series (viral load= 201-10k: RR= 0.89, 95%CI: 0.85-0.94; viral load>10k: RR= 0.92, 95%CI: 0.87-0.98).

RESULTS

- A total of 22,063 PWH were identified: 89% were male, 93% were viral suppressed (viral load ≤200 copies/ml).
- About 25% had a Charlson comorbidity score of 1-2 and 13% had a score of ≥3.
- About 23% were overweight and 17% were obese.
- PWH who lived in the communities with a higher COVID-19 vaccine coverage were more likely to complete the initial primary series.



CONCLUSIONS

- Rapid COVID-19 vaccine uptake was achieved within the 6 months after the national COVID-19 vaccination program launched on Dec. 14, 2020.
- Coverage of the COVID-19 vaccine primary series was high in adult PWH in the VSD.
- Completion of the initial primary series varied by sex and race/ethnicity.
- Targeted vaccination outreach is warranted for PWH with low CD4 counts and uncontrolled HIV viral load.

ADDITIONAL KEY INFORMATION

Participating Sites

Kaiser Permanente (Southern California, Northern California, Colorado, Northwest, Washington) Marshfield, HealthPartners, Denver Health.

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